

ERMP-01 RECEIPT OF MATERIAL

Equipment Required/Prerequisites:

- Bicron MicroRem Gamma Radiation Detector or Equivalent
- Ludlum Alpha/Beta Scintillator – Phoswich detector (Model 43-2-2) or equivalent
- Ludlum Scaler/Ratemeter (Model 2224-1) or equivalent, Ludlum Sample Holder (Model 180-1) or equivalent

Note: Instruments are to be maintained and operated in accordance with ERMP-06.

- Personal ~~Protection~~ Protective Equipment (PPE) as specified in the Health and Safety ~~Plan~~ Manual
- Personnel monitoring devices when working with exempt radioactive materials

Caution: The offloading, surveying, and inspection of exempt radiological materials shall only be performed by USEI personnel who are wearing personal dosimeters and proper PPE. All unnecessary personnel (e.g., truck drivers, contractors or other visitors) will be restricted from access to those areas where offloading, inspections, and surveys are being performed.

1.0 SURVEY OF RADIOLOGICAL CONVEYANCES AND CONTAINERS

- 1.1 Perform a direct gamma radiation and wipe survey on received conveyance/container or transfer truck leaving the ~~R~~Rail ~~T~~ransfer ~~F~~acility (RTF) per ERMP-06.

1.1.1 Gamma Action Levels of each shipment type and waste stream are detailed in sections 2 thru 6.

1.1.2 The Surface Contamination of DOT Class 7 shipments (49 CFR 173.443) must be less than:

7,200 dpm/300 cm²

- 1.2 If any Action Levels are exceeded, contact the Radiation Protection Specialist (RPS) and alert others to avoid contact with the conveyance.

- 1.3 If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.

- 1.4 If the shipment doesn't exceed any action levels, record the readings on the appropriate survey form determined by the shipment type (Figure 1-1, 1-3, or 1-4). The completed survey form is maintained in the operating record.

2.0 RAILCARS AT RTF

- 2.1 Verify ~~that~~ the serial numbers of the rail cars that arrived at the RTF match the serial numbers provided by the Transportation Coordinator, or designee. The serial numbers must match the list provided by ~~the~~ Transportation Personnel; otherwise the rail car cannot be unloaded until the discrepancy is resolved.

A. TABLE C-1a (U-NAT) GAMMA ACTION LEVELS

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221.4 μ R/hr (Average of all readings): Continue survey and calculate the average of all gamma readings. Compare the average reading to the conversion chart (Figure 1-2a) for approximate activity concentrations. If the converted activity exceeds the screening level of 167 pCi/g, contact the RPS.

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500 μ R/hr \leq any reading \leq 2000 μ R/hr: Continue survey and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

2000 μ R/hr: Stop surveying, contact the RPS, move the railcar to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the railcar. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

B. TABLE C-1b (Th-NAT) GAMMA ACTION LEVELS

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107.8 μ R/hr (Average of all readings): Continue survey and calculate the average of all gamma readings. Compare the average reading to the conversion chart (Figure 1-2b) for approximate activity concentrations. If the converted activity exceeds the screening level of 55 pCi/g, contact the RPS.

500 μ R/hr \leq any reading \leq 2000 μ R/hr: Continue survey and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

2000 μ R/hr: Stop surveying, contact the RPS, move the railcar to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the railcar. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

C. TABLE C-2a (RADIUM <500) GAMMA ACTION LEVELS

650 μ R/hr (Average of all readings): Continue survey and calculate the average of all gamma readings. Compare the average reading to the conversion chart (Figure 1-2c) for approximate activity concentrations. If the converted activity exceeds the screening level of 500 pCi/g, contact the RPS.

1000 μ R/hr \leq any reading \leq 2000 μ R/hr: Continue survey and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

2000 μ R/hr: Stop surveying, contact the RPS, move the railcar to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the railcar. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

3.0 RTF TRANSFER TRUCKS

A. TABLE C-1a (U-NAT) GAMMA ACTION LEVELS

270 μ R/hr (Average of all readings): Continue survey and calculate the average of all gamma readings. Compare the average reading to the conversion chart (Figure 1-2d) for approximate activity concentrations. If the converted activity exceeds the screening level of 167 pCi/g, contact the RPS.

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500 μ R/hr \leq any reading \leq 2000 μ R/hr: Continue survey and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

2000 µR/hr: Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

B. TABLE C-1b (Th-NAT) GAMMA ACTION LEVELS

128 µR/hr (Average of all readings): Continue survey and calculate the average of all gamma readings. Compare the average reading to the conversion chart (Figure 1-2e) for approximate activity concentrations. If the converted activity exceeds the screening level of 55 pCi/g, contact the RPS.

500 µR/hr ≤ any reading ≤ 2000 µR/hr: Continue survey and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

2000 µR/hr: Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

C. TABLE C-2a (RADIUM <500) GAMMA ACTION LEVELS

795 µR/hr (Average of all readings): Continue survey and calculate the average of all gamma readings. Compare the average reading to the conversion chart (Figure 1-2f) for approximate activity concentrations. If the converted activity exceeds the screening level of 500 pCi/g, contact the RPS.

1000 µR/hr ≤ any reading ≤ 2000 µR/hr: Continue survey and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

2000 µR/hr: Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

4.0 BULK MATERIALS RECEIVED AT SITE B

A. TABLE C-1a (U-NAT) GAMMA ACTION LEVELS

217 µR/hr (Average of all readings): Continue survey and calculate the average of all gamma readings. Compare the average reading to the conversion chart (Figure 1-2g) for approximate activity concentrations. If the converted activity exceeds the screening level of 167 pCi/g, contact the RPS.

500 µR/hr ≤ any reading ≤ 2000 µR/hr: Continue survey and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

2000 µR/hr: Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

B. TABLE C-1b (Th-NAT) GAMMA ACTION LEVELS

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104 µR/hr (Average of all readings): Continue survey and calculate the average of all gamma readings. Compare the average reading to the conversion chart (Figure 1-2h) for approximate activity concentrations. If the converted activity exceeds the screening level of 55 pCi/g, contact the RPS.

500 µR/hr ≤ any reading ≤ 2000 µR/hr: Continue survey and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

2000 µR/hr: Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

C. TABLE C-2a (RADIUM <500) GAMMA ACTION LEVELS

640 µR/hr (Average of all readings): Continue survey and calculate the average of all gamma readings. Compare the average reading to the conversion chart (Figure 1-2i) for approximate activity concentrations. If the converted activity exceeds the screening level of 540,000 pCi/g, contact the RPS.

1000 µR/hr ≤ any reading ≤ 2000 µR/hr: Continue survey and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

2000 µR/hr: Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

5.0 TABLE C-2c (Pb-210)

5.1 Gamma Action Level is twice background for all container types.

6.0 TABLE C-3 AND TABLE C-4a

6.1 Gamma Action Level is 10 mR/hr (average of all readings).

6.2 Each shipment shall be accompanied by a bill of lading and inventory that gives the total activity of each radionuclide in the shipment. Discrepancies shall be investigated and if not resolved, referred to the RPS.

7.0 TABLE C-2b, C-4b, TABLE C-4c AND NON-BULK CONTAINERS

7.1 Gamma Action Levels are waste stream specific. The average dose rate will be compared to the waste stream specific activity vs. dose rate chart developed in the profiling approval process. Should the dose rate exceed the average concentration limits the RPS will be notified.

7.2 All loads with radium >500 pCi/g (Table C-2b) must be vented for at least 1 minute prior to initial inspection and fingerprinting while personnel remain upwind.

8.0 GENERAL RECEIPT PRACTICES

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8.1 Once a truck or shipment of packages has been cleared, it is moved to the Site B disposal cell or staged in a designated storage area.

8.2 Conveyances or packages awaiting a determination of disposition will be stored temporarily in a secure and remote area. The area will be posted "Caution Radioactive Material."

Portable radiological survey instruments are to be operated in accordance with ERMP-06.

Note: Radiological instruments are calibrated annually with NIST traceable sources.

1.0 RECEIPT INSPECTION PROCEDURE AT THE RAIL TRANSFER FACILITY (RTF)

A. WASTE ACCEPTANCE CRITERIA TABLE C-1a FOR NATURAL URANIUM (U-NAT) IN WASTE ANALYSIS PLAN (WAP)

1.1 Verify that the serial numbers of the rail cars that arrived at the RTF match the serial numbers provided by the Transportation Coordinator. The serial numbers must match the list provided by the Transportation Personnel; otherwise the rail car cannot be unloaded until the discrepancy is resolved.

1.2 Prior to untarping, perform a direct gamma radiation survey on the rail car per ERMP-06.

1.3 Prior to untarping, perform a wipe survey on the railcar to determine removable contamination and analyze the wipes per ERMP-02.

1.4 Action Levels

Gamma

2000 uR/hr:

Stop surveying, contact the RPS, move the rail car to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the rail car. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

500 uR/hr \leq any reading \leq 2000 uR/hr

Continue surveying and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

224 uR/hr (Average of all readings)

Continue surveys and then calculate the average of all gamma readings. Compare the average reading to the conversion chart (ERMP-01, Figure 1-2a) for approximate activity concentrations. If the converted activity exceeds the screening level of 167 pCi/g, contact the RPS.

Surface Contamination (DOT Class 7 shipments only)

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6,600 dpm/300 cm²

Contact the RPS and alert others to avoid touching the conveyance.

1.5 If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.

1.6 If the shipment doesn't exceed any action levels, record the readings (Figure 1-1) on the manifest paperwork accompanying the subsequent truck to Site B. The completed survey form is maintained in the operating record.

B. WASTE ACCEPTANCE CRITERIA TABLE C-1b FOR NATURAL THORIUM (TH-NAT) IN WAP

1.1 Verify that the serial numbers of the rail cars that arrived at the RTF match the serial numbers provided by the Transportation Coordinator. The serial numbers must match the list provided by the Transportation Personnel; otherwise the rail car cannot be unloaded until the discrepancy is resolved.

1.2 Prior to untarping, perform a direct gamma radiation survey on the rail car per ERMP-06.

1.3 Prior to untarping, perform a wipe survey on the railcar and analyze the wipes per ERMP-02.

1.4 Action Levels

Gamma

2000 uR/hr:

Stop surveying, contact the RPS, move the rail car to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the rail car. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

500 uR/hr ≤ any reading ≤ 2000 uR/hr

Continue surveying and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

107.8 uR/hr (Average of all readings)

Continue surveys and then calculate the average of all gamma readings. Compare the average reading to the conversion chart (ERMP-01, Figure 1-2b) for approximate activity concentrations. If the converted activity exceeds the screening level of 55 pCi/g, contact the RPS.

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

Contact the RPS and alert others to avoid touching the conveyance.

1.5 If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.

1.6 If the shipment doesn't exceed any action levels, record the readings (Figure 1-1) on the manifest paperwork accompanying the subsequent truck to Site B. The completed

survey form is maintained in the operating record.

C. WASTE ACCEPTANCE CRITERIA TABLE C-2a- RADIUM

- 1.1 — Verify that the serial numbers of the rail cars that arrived at the RTF match the serial numbers provided by the Transportation Coordinator. The serial numbers must match the list provided by the Transportation Personnel; otherwise the rail car cannot be unloaded until the discrepancy is resolved.
- 1.2 — Prior to untarping, perform a direct gamma radiation survey on the rail car per ERMP-06.
- 1.3 — Prior to untarping, perform a wipe survey on the railcar and analyze the wipes per ERMP-02.
- 1.4 — Action Levels

Gamma

2000 uR/hr:

Stop surveying, contact the RPS, move the rail car to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the rail car. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

1000 uR/hr \leq any reading \leq 2000 uR/hr

Continue surveying and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

650 uR/hr (Average of all readings)

Continue surveys and then calculate the average of all gamma readings. Compare the average reading to the conversion chart (ERMP-01, Figure 1-2c) for approximate activity concentrations. If the converted activity exceeds the screening level of 500 pCi/g, contact the RPS.

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

Contact the RPS and alert others to avoid touching the conveyance.

- 1.5 — If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.
- 1.6 — If the shipment doesn't exceed any action levels, record the readings (Figure 1-1) on the manifest paperwork accompanying the subsequent truck to Site B. The completed survey form is maintained in the operating record.

2.0 — SURVEY OF TRANSFER TRUCKS AT THE RTF

A. WASTE ACCEPTANCE CRITERIA TABLE C-1a (U-NAT)

- 2.1 — When loading a transfer truck at the RTF destined for Site B, surveys will be performed as follows:

2.2 — After tarping, perform a direct gamma radiation survey on the truck per ERMP-06.

2.3 — After tarping, perform a wipe survey on the truck and analyze the wipes per ERMP-02.

2.4 — Action Levels

Gamma

2000 uR/hr:

Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

500 uR/hr ≤ any reading ≤ 2000 uR/hr

Continue surveying and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

270 uR/hr (Average of all readings)

Continue surveys and then calculate the average of all gamma readings. Compare the average reading to the conversion chart (ERMP-01, Figure 1-2d) for approximate activity concentrations. If the converted activity exceeds the screening level of 167 pCi/g, contact the RPS.

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

Contact the RPS and alert others to avoid touching the conveyance.

2.5 — If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.

B. WASTE ACCEPTANCE CRITERIA TABLE C-1b (TH-NAT)

2.1 — When loading a transfer truck at the RTF destined for Site B, surveys will be performed as follows:

2.2 — After tarping, perform a direct gamma radiation survey on the truck per ERMP-06.

2.3 — After tarping, perform a wipe survey on the truck and analyze the wipes per ERMP-02.

2.4 — Action Levels

Gamma

2000 uR/hr:

Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

500 uR/hr ≤ any reading ≤ 2000 uR/hr

~~Continue surveying and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.~~

128 uR/hr (Average of all readings)

~~Continue surveys and then calculate the average of all gamma readings. Compare the average reading to the conversion chart (ERMP-01, Figure 1-2e) for approximate activity concentrations. If the converted activity exceeds the screening level of 55 pCi/g, contact the RPS.~~

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

~~Contact the RPS and alert others to avoid touching the conveyance.~~

- 2.5 — ~~If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.~~

G. WASTE ACCEPTANCE CRITERIA TABLE G-2a (RADIUM)

- 2.1 — ~~When loading a transfer truck at the RTF destined for Site B, surveys will be performed as follows.~~

- 2.2 — ~~After tarping, perform a direct gamma radiation survey on the truck per ERMP-06.~~

- 2.3 — ~~After tarping, perform a wipe survey on the truck and analyze the wipes per ERMP-02.~~

- 2.4 — ~~Action Levels~~

Gamma

2000 uR/hr:

~~Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.~~

1000 uR/hr ≤ any reading ≤ 2000 uR/hr

~~Continue surveying and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.~~

795 uR/hr (Average of all readings)

~~Continue surveys and then calculate the average of all gamma readings. Compare the average reading to the conversion chart (ERMP-01, Figure 1-2f) for approximate activity concentrations. If the converted activity exceeds the screening level of 500 pCi/g, contact the RPS.~~

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

~~Contact the RPS and alert others to avoid touching the conveyance.~~

~~2.5 — If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.~~

3.0 — RECEIPT INSPECTION PROCEDURE FOR DIFFUSE MATERIALS AT SITE B

A. WASTE ACCEPTANCE CRITERIA TABLE C-1a (U-NAT)

~~3.1 — This section applies to a bulk load truck arriving at Site B with a shipment for disposal that has not been loaded at the RTF, where the survey would have already been performed.~~

~~3.2 — Prior to untarping, perform a direct gamma radiation survey on the truck per ERMP-06.~~

~~3.3 — Prior to untarping, perform a wipe survey on the truck and analyze the wipes per ERMP-02.~~

~~3.4 — Action Levels~~

Gamma

2000 uR/hr:

~~Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.~~

500 uR/hr ≤ any reading ≤ 2000 uR/hr

~~Continue surveying and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.~~

217 uR/hr (Average of all readings)

~~Continue surveys and then calculate the average of all gamma readings. Compare the average reading to the conversion chart (ERMP-01, Figure 1-2g) for approximate activity concentrations. If the converted activity exceeds the screening level of 167 pCi/g, contact the RPS.~~

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

~~Contact the RPS and alert others to avoid touching the conveyance.~~

~~3.5 — If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.~~

B. WASTE ACCEPTANCE CRITERIA TABLE C-1b (TH-NAT)

~~3.1 — This section applies to a bulk load truck arriving at Site B with a shipment for disposal that has not been loaded at the RTF, where the survey would have already been performed.~~

~~3.2 — Prior to untarping, perform a direct gamma radiation survey on the truck per ERMP-06.~~

3.3 — ~~Prior to untarping, perform a wipe survey on the truck and analyze the wipes per ERMP-02.~~

3.4 — Action Levels

Gamma

2000 uR/hr:

Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

500 uR/hr ≤ any reading ≤ 2000 uR/hr

Continue surveying and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

104 uR/hr (Average of all readings)

Continue surveys and then calculate the average of all gamma readings. Compare the average reading to the conversion chart (ERMP-01, Figure 1-2h) for approximate activity concentrations. If the converted activity exceeds the screening level of 55 pCi/g, contact the RPS.

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

Contact the RPS and alert others to avoid touching the conveyance.

3.5 — ~~If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.~~

C. WASTE ACCEPTANCE CRITERIA TABLE C-2a (RADIUM)

3.1 — This section applies to a bulk load truck arriving at Site B with a shipment for disposal that has not been loaded at the RTF, where the survey would have already been performed.

3.2 — Prior to untarping, perform a direct gamma radiation survey on the truck per ERMP-06.

3.3 — Prior to untarping, perform a wipe survey on the truck and analyze the wipes per ERMP-02.

3.4 — Action Levels

Gamma

2000 uR/hr:

Stop surveying, contact the RPS, move the truck to a remote location (a sufficient distance from any occupied building) and restrict access to the vicinity of the truck. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.

1000 uR/hr \leq any reading \leq 2000 uR/hr

Continue surveying and contact the RPS. The RPS or his designee will evaluate the waste shipment as described in ERMP-05.

640 uR/hr (Average of all readings)

Continue surveys and then calculate the average of all gamma readings. Compare the average reading to the conversion chart (ERMP-01, Figure 1-2i) for approximate activity concentrations. If the converted activity exceeds the screening level of 500 pCi/g, contact the RPS.

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

Contact the RPS and alert others to avoid touching the conveyance.

3.5 — If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.

4.0 — RECEIPT INSPECTION PROCEDURE FOR TABLE C-1a OR C-1b (U-NAT OR TH-NAT) AND TABLE C-2a (RADIUM) DIFFUSE MATERIALS IN CONTAINERS AT SITE B

4.1 — Non-Bulk containers may be in the form of bags, boxes, pallets or drums.

4.2 — Perform a direct gamma radiation survey on the non-bulk container per ERMP-06.

4.3 — Perform a wipe survey on the non-bulk container and analyze the wipes per ERMP-02.

4.4 — Action Levels

Gamma

The average dose rate will be compared to the waste stream specific activity vs. exposure rate chart developed in the profiling approval process. Should the dose rate exceed the average concentration limits the RPS will be notified.

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

Contact the RPS and alert others to avoid touching the container. The RPS will perform a confirmatory wipe survey.

4.5 — If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.

5.0 — RECEIPT AND INSPECTION PROCEDURES FOR EXEMPT ACCELERATOR-PRODUCED RADIOACTIVE MATERIALS AND FILTER MEDIA CONTAINING RA-226 AND RA-228 AT CONCENTRATIONS GREATER THAN 500 PICOCURIES PER GRAM AT SITE B

Caution: Exempt, accelerator-produced materials and materials containing ^{226}Ra and ^{228}Ra at concentrations greater than 500 pCi/g shall only be offloaded, surveyed and inspected by USEI personnel who are wearing personnel dosimeters. All unnecessary personnel (e.g. truck drivers, contractors or other visitors) will be restricted from access to those areas where offloading, inspections and surveys are being performed.

- 5.1 — Each shipment shall be accompanied by a bill of lading and inventory that gives the total activity of each radionuclide in the shipment. Discrepancies shall be investigated and if not resolved, referred to the RPS or the RSO.
- 5.2 — Perform a direct gamma radiation survey on the non-bulk container per ERMP-06.
- 5.3 — Perform a wipe survey on the non-bulk container and analyze the wipes per ERMP-02.
- 5.4 — Action Levels

Gamma

10 mR/hr for all radionuclides except Radium.

Waste stream specific average dose rate for packages containing Radium.

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

Contact the RPS and alert others to avoid touching the package. The RPS will perform a confirmatory wipe survey.

- 5.5 — If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.

6.0 — RECEIPT AND INSPECTION PROCEDURES FOR TABLE C-4a, EXEMPT PRODUCTS, DEVICES OR ITEMS OR TABLE C-4b, MATERIALS SPECIFICALLY EXEMPTED BY NRC OR NRC AGREEMENT STATE, OR TABLE C-4c, MATERIALS RELEASED BY OTHER GOVERNMENT AGENCIES.

- 6.1 — Perform a direct gamma radiation survey on the container per ERMP-06.
- 6.2 — Perform a wipe survey on the container and analyze the wipes per ERMP-02.
- 6.3 — Action Levels

Gamma

Table C-4a- 10 mR/hr average of all readings in bulk and non-bulk containers

Table C-4b, C-4c - Waste stream specific activity vs. exposure rate chart in bulk or non-bulk containers

Surface Contamination (DOT Class 7 shipments only)

6,600 dpm/300 cm²

~~Contact the RPS and alert others to avoid touching the container. The RPS will perform a confirmatory wipe survey.~~

~~6.4 For Table C-4b or C-4c, calculate the average of all gamma readings. Compare the average reading to the waste stream specific activity vs. exposure rate chart developed in the profiling approval process. Should the dose rate exceed the average concentration limits the RPS will be notified.~~

~~6.5 The RPS will evaluate the waste shipment using the procedures described in ERMP-05.~~

~~6.6 If the RPS determines that a portion or all of a waste shipment is to be rejected, procedures described in ERMP-05 will be followed.~~

7.0 RECEIPT AND INSPECTION PROCEDURES FOR LIQUIDS WITH A DOSE RATE OF LESS THAN 40 μ R/HR.

Attention: Liquid materials may originate from the wash water holding tank at the RTF or from a customer. Both shall be handled in the same manner. Containers that hold these liquids may be drums, totes, tankers, or other appropriate devices.

~~7.1 Perform a direct gamma radiation survey on tanker, tote or drum.~~

~~7.2 Action Levels~~

Gamma

40 μ R/hr:

~~If the average reading exceeds 40 μ R/hr, move the tanker to a remote location and resurvey. If the radiation level still exceeds 40 μ R/hr contact the RPS. The RPS will verify the reported readings and if confirmed follow the guidance provided in ERMP-05.~~

~~7.3 Surveys of liquids which exceeds 40 μ R/hr at one inch.~~

Attention: This type of material can only be received with prior approval of the IDEQ. The submission to IDEQ will contain calculations of the expected average dose rate on the liquid based on the concentrations of the various radionuclides present. The RPS will make the expected dose rate available to the technicians for verification upon receipt of the material. The same procedure as described in Section 6.2 will be followed for receipt of shipments of these materials with the exception that the acceptance criteria will be changed from 40 μ R/hour to the dose rate provided to the IDEQ in the request for approval.

8.0 GENERAL RECEIPT PRACTICES

~~8.1 Once a truck or shipment of packages has been cleared, it is moved to the Site B disposal cell or staged in a designated storage area.~~

~~8.2 Conveyances or packages awaiting a determination of disposition will be stored temporarily in a secure and remote area. The area will be posted "Caution-Radioactive Material."~~

ERMP-01 Figure 1-1

RAIL TRANSFER FACILITY IN-BOUND GONDOLA GAMMA SURVEY

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ERMP-01 Figure 1-2a

U-NAT IN GONDOLA
ACTIVITY CONCENTRATIONS VS. BULK LOAD EXPOSURE RATE

ERMP-01 Figure 1-2b

TH-NAT IN GONDOLA
ACTIVITY CONCENTRATIONS VS. BULK LOAD EXPOSURE RATE

ERMP-01 Figure 1-2c

RADIUM 226/228 IN GONDOLA
ACTIVITY CONCENTRATIONS VS. BULK LOAD EXPOSURE RATE

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ERMP-01 Figure 1-2d

U-NAT IN TRUCKS LOADED AT RTF
ACTIVITY CONCENTRATIONS VS. BULK LOAD EXPOSURE RATE

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ERMP-01 Figure 1-2e

TH-NAT IN TRUCKS LOADED AT RTF
ACTIVITY CONCENTRATIONS VS. BULK LOAD EXPOSURE RATE

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ERMP-01 Figure 1-2f

RADIUM 226/228 IN TRUCKS LOADED AT RTF
ACTIVITY CONCENTRATIONS VS. BULK LOAD EXPOSURE RATE

ERMP-01 Figure 1-2g

U-NAT IN TRUCKS AT SITE B
ACTIVITY CONCENTRATIONS VS. BULK LOAD EXPOSURE RATE

ERMP-01 Figure 1-2h

TH-NAT IN TRUCKS AT SITE B
ACTIVITY CONCENTRATIONS VS. BULK LOAD EXPOSURE RATE

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ERMP-01 Figure 1-2i

RADIUM 226/228 IN TRUCKS AT SITE B
ACTIVITY CONCENTRATIONS VS. BULK LOAD EXPOSURE RATE

ERMP-01 Figure 1-3

GAMMA RADIATION SURVEY - TRAILERS

ERMP-01 Figure 1-4

NON-BULK CONTAINER GAMMA RADIATION SURVEY